

**STRATEGY  
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**AIR POWER IN CONFLICT RESOLUTION**

**BY**

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## Abstract

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This paper explores the strategy of air power employment in our history. It first looks at the genesis of air power theory and the legendary men who contributed to its development. Based on that foundation, the paper then defines the two extreme positions taken on the level of contribution that air power should make to conflict resolution. Historical cases from selected conflicts are discussed, emphasizing the role that air power was allowed to play. The focus of these case studies is on the successes, failures, and impact of air power and the underlying reasons for each. The paper concludes with an analysis of that data and recommendations for future strategists as we contemplate the application of air power in the resolution of future conflicts.

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"We've got the blockade going on; we've got diplomatic efforts going on; we've got psychological efforts going on. But when you finally get down to violence, in my view, it's [air power] the only option. That does not mean that the ground forces that are there would not be used to intimidate, to demonstrate, to do lots of things. I just don't see us conducting a big ground invasion."<sup>1</sup> -- General Michael J. Dugan, Former Chief of the Air Force

"There is a way to get rid of billions of ugly fat in the defense budget without losing an ounce of combat power: Abolish the Air Force....The US Air Force was created to honor a false premise that should have been discredited long ago; that premise is the efficacy of airpower as an independent war-winning doctrine."<sup>2</sup> -- LtCol Gary Anderson, USMC battalion commander

## INTRODUCTION

Long before the Air Age began on 17 December 1903, when Orville and Wilbur Wright piloted the first flights in a motor-driven, heavier-than-air craft at Kitty Hawk, North Carolina,<sup>3</sup> men had for many years contemplated the employment of aerial craft as weapons in war. In the late eighteenth century the Montgolfier brothers demonstrated free flight in a lighter-than-air balloon and the French government shortly established a balloon unit for the purpose of reconnaissance.<sup>4</sup> In the early nineteenth century, other militaries experimented with these aircraft, not just for reconnaissance, but for offensive action, including one effort by an Austrian lieutenant to bomb the city of Venice.<sup>5</sup> The potential of the airplane and other means of aerial flight and its use in war were on the minds of military strategists from the outset.

Air power and its role in armed conflict have placed many military strategic thinkers on two seemingly extreme ends of the spectrum. On the one side are the

air power advocates who believe that air power, if properly applied, will either achieve victory alone or, if not, at least be the decisive arm in forcing an opponent to capitulate to political demands. On the other are the land power advocates who view air power as a sometimes necessary precursor to an inevitable land campaign. They quickly add that it will always be that way!

Both sides make interesting arguments. In most air power debates, however, the land power advocates have had the upper hand. Historians seem to support their view as they have disputed the effectiveness of strategic bombing since World War II.<sup>6</sup>

## PURPOSE

The purpose of this paper is to examine the United States' concept for the application of air power in the resolution of conflict. The paper's thesis is that air power, in most circumstances, can be decisive in conflict resolution. The strategy for resolving that conflict must be based on the premise of using air power as the primary component to achieve the desired end state supported by other elements of military power.

This paper explores the use of air power in our history. It first looks at the genesis of air power theory and the legendary men who contributed to its development. Based on that foundation, the paper then defines the dilemma that faces us today. Historical cases from selected conflicts are discussed emphasizing the role that air power was allowed to play in each. The focus of these case studies is on the successes and failures of air power and the underlying reasons for each.

The paper concludes with an analysis of that data with recommendations for future strategists as we contemplate the use of air power in the resolution of future conflicts.

## SECTION I

### FOUNDATIONS OF MILITARY AVIATION

Air power theory did not result solely from the Wright brothers' innovations or military aviation in the early twentieth century. It was the product of the independent thoughts of visionary thinkers throughout the world. It primarily took hold in three countries: Italy, Britain, and the United States.<sup>7</sup> Only the latter two would put it into practical application by World War II.

Air power theory had as its genesis a concern with the ends of a war rather than with its means. General James Fechet, who succeeded General Billy Mitchell as assistant chief of the Air Service in 1925, and went on to be chief of the Air Corps (1927-1931) stated that the objective of war is to overcome the enemy's will to resist. The defeat of his armed forces or occupying his territory is merely a means and not the true objective.<sup>8</sup> Air power was not just a new tool with which to wage war, but a way to get to the heart of ending a war.

Giulio Douhet, an Italian, is generally accepted as the first person to address air power theory in what he called "command of the air."<sup>9</sup> The central thesis of his air power strategy was in the form of an axiom. "To conquer the command of the air means victory; to be beaten in the air means defeat and acceptance of whatever

terms the enemy may be pleased to impose.”<sup>10</sup> To this axiom he added two corollaries:

“1. In order to assure an adequate national defense, it is necessary—and sufficient—to be in a position in case of war to conquer the command of the air.

2. All that a nation does to assure her own defense should have as its aim procuring for herself those means which, in case of war, are most effective for the conquest of the command of the air.”<sup>11</sup>

Douhet believed in the supremacy of air power in war. His concept was that the effective use of air power was to be dominant and decisive in war. Douhet thought that to have command of the air meant to wield unimaginable offensive power. It meant cutting off an enemy's army and navy from their bases of operation and nullifying their chances of winning the war. For the country who possessed it, command of the air meant complete self-protection, the efficient operation of one's army and navy, and peace of mind to live and work in safety. It meant to be in a position to win! To be defeated in the air is to be defeated! To be defeated in the air is to be at the mercy of the enemy, with no chance at all of defending oneself, compelled to accept whatever terms he sees fit to dictate.<sup>12</sup> In Douhet's view, the resolution of any conflict for a nation, either in victory or defeat, rested on the strength of its air power.

Air Marshall Hugh Trenchard championed the emergence of air power theory in Great Britain. He was a major advocate of the offensive capability of aircraft. He commanded the Royal Air Corps during World War I and recognized the value of breaking the terrible stalemate of trench warfare through the relentless and



incessant offensive application of air power. Unknowingly, Trenchard's theories were impacting his American disciple, General Billy Mitchell.<sup>13</sup>

General Billy Mitchell, while clearly being influenced by Douhet and Trenchard, was more of an advocate and promoter of air power than a theorist. He wrote that air power offered an entirely new method of subduing our nation's enemies. He postulated that the bombing of industrial targets would negate the requirement for land advances because the people of industrial cities would evacuate them to flee from the hardship. Moreover, bombing may not even be necessary because "...the mere threat of bombing a town by an air force will cause it to be evacuated, and all work in munitions and supply factories to be stopped."<sup>14</sup>

According to Mitchell, air power would not only win the war and relegate the Army and Navy to secondary roles, it would also offer great savings to the nation who possessed it and impose great costs upon the victim of it. Air power would strike at the heart of the enemy, hitting manufacturing and food centers, railways, bridges, harbors, etc. The opposing army and navy would therefore not have to be totally destroyed to be defeated because the home economy could no longer support them. The victor would save untold lives and resources and could dictate any terms he desired.<sup>15</sup>

Mitchell took his advocacy of a superior air power directly to the public. He attacked bureaucracies he perceived as impeding the proper development of air power. He would be most remembered for events; the sinking of the German battleship *Ostfriesland* (1921) as a demonstration of air power for coastal defense

and, only four years later, his highly publicized court-martial for insubordination. Yet much of his legacy was his zeal for air power and his abiding respect for airmen as the new breed.<sup>16</sup> He is the person most responsible for the current rift between air power advocates and land power advocates.

The legacy of World War I contributed significantly to the evolution of air power theory, particularly for the Americans and the British. While the role of American air power in World War I was very brief, it would have a significant effect on the post war development of the airplane. The Americans saw the airplane as the ultimate offensive weapon which could break the deadlock of trench warfare, hitting the enemy deep behind the front lines as well as at the center of his power. The British, on the other hand, were on the receiving end of strategic bombardment by the Germans and were traumatized by it. They believed that bombing of cities had a tremendous "psychological shock" on the public and this strategy would be extremely effective against any enemy as it had been against them.<sup>17</sup>

These collective experiences resulted in two aspects of air power theory taking root in American and British air power thinkers which would last for the next 40 years:

1. The importance or primacy of the offensive in the use of military aviation;  
and
2. The bombing of cities could have a demoralizing effect upon the populations supporting modern warfare.<sup>18</sup>

## SECTION II

### THE DEBATE

The theories of Douhet, and Trenchard, and the strong advocacy of Mitchell for the supremacy of air power were imbued in the minds of many servicemen. Their advocacy, efforts, and influence were paramount in the early development of the airplane and air tactics. They did not, however, convince a majority of the senior leadership of any of the world powers that their theories were valid. Air power advocates are having a similar problem today.

A problem with taking an objective view of the benefits of air power in conflict resolution arises out of the extreme positions taken by each side. Neither one wants to acknowledge the others view point or that it may be valid in certain circumstances.

Air Force doctrine prior to World War II, as enunciated by the Air Corps Tactical School, rested on the proposition that the principal and all important mission of air power is to attack vital segments of a nation's economic structure. The nation would then be unable to wage war and ultimately succumb.<sup>19</sup> Most Air Corps officers believed air power could be decisive in this role, a view shared by many Air Force officers today.

The General Staff and officers of other arms could not accept this in the absence of some demonstration. As the War Plans Division put it: "So far, well-organized nations have surrendered only when occupied by the enemy's army or

when such occupation could no longer be opposed.” Air forces could provide support but could not themselves achieve this victory.<sup>20</sup>

These opposing stances by proponents of air power and land power exist today. As quoted earlier, General Michael J. Dugan, USAF Retired, was publicly vocal about the supremacy of air power and his view that air power was the “only option” in the Gulf War. Conversely General Frederick J. Kroessen, USA Retired, former Commander in Chief of U.S. Army Europe, recently wrote that ... “The U.S. Army...remains today the instrument that ultimately counters threats to our national interests.”<sup>21</sup> “Only the Army can conclude a conquest.”<sup>22</sup>

## SECTION III

### APPLICATION VERSUS USE

The real issue is the strategy of air power application, not the actual use of it. Air power has been used in almost every military conflict since the appearance of aircraft. It has been a part of our overall strategy for victory. Its application, however, has seldom been in a primary role nor deemed decisive in the resolution of conflict. A brief look at a few historical cases will bring this disparity into focus.

#### **World War II - European Theater**

During World War II, most historians would agree that the beginning of the end for the *Third Reich* was Operation Overlord, the invasion of mainland Europe at Normandy, France. This was an operation of huge proportions. At the time of its execution, it had been in the planning stages for almost 18 months.<sup>23</sup>

American air power strategists had been envisioning how to defeat the Axis powers since 1941. General Henry "Hap" Arnold had just put together an Air War Plans Division in July of that year. He staffed it with superior young aviators who were all instructors at the Air Corps Tactical School and were proponents of its theories.<sup>24</sup> Each was highly intelligent and believed in the supremacy of air power.

Their job was to write the air annex for a war plan that would guide the United States if it should be drawn into a fight with the Axis. A mere nine days later, the plan was finished. It was a remarkable document in its foresight. However, the planners, while strong believers in the capability to win the war with airpower, were torn by the prevailing strategies of the day.

The Division Chief, in designing the air force, agonized over what type to recommend. If air power were to support the surface forces he would determine one mix of airplanes. If it was meant to compel surrender without an invasion, he would design quite a different force. Yet he knew that the Army war planners would demand heavy emphasis on close air support for a ground invasion. While he believed air power could do the job, preparing an all-air power plan only to have it disapproved made little sense. Despite two revisions, Air War Plans Document-1 (AWPD-1) was born. It correctly foresaw what top priority targets would be and envisioned an industrial expansion to provide a force of American heavy bombers that was less than two percent different from the actual number that were flying combat missions in March 1945.<sup>25</sup>

Detailed planning for the invasion began with the appointment of British Lieutenant General Frederick E. Morgan to head a special planning staff. In April

1943 he received his directive from the Combined Chiefs of Staff to commence planning. A month later the heads of state of the Allied Powers told Morgan to plan to assault about 1 May 1944 with three infantry divisions. Two more infantry divisions would be afloat and two airborne divisions would also be available. Agreement was also reached on a plan to use the Combined Bomber Offensive to help pave the way for the cross-Channel invasion.<sup>26</sup>

In both the Royal Air Force and the United States Army Air Forces there were some who believed that air power could deliver the knockout blow against Germany and force capitulation. This view, however, was not controlling in the overall Allied strategic plan. The dominant element in that plan was invasion of the continent.<sup>27</sup>

The planners did envision that airpower would play a vital role in preparations for the invasion. Plans called for establishing air superiority prior to the date of the invasion and the exploitation of such superiority in weakening the enemy's will and capacity to resist. Deep raids on German aircraft production facilities could be expected to not only damage those plants, but get German fighters to try to defend them. Simultaneously, Allied air forces would attack other key targets, such as transportation systems and oil production facilities. Moreover, a major aim of this air offensive was the reduction of the morale of German civilians.<sup>28</sup> Interestingly enough, these were the same target priorities that Hap Arnold's AWPD planners identified two years earlier.

Prime Minister Winston Churchill and President Roosevelt approved the overall plan in August 1943.<sup>29</sup> As yet, the Supreme Commander had not been appointed.

President Roosevelt finally decided on General Dwight D. Eisenhower to be the Supreme Commander on 7 December 1943. Upon assuming his duties and having studied the Morgan plan, Eisenhower felt the invasion front was too narrow and that the ground forces of five divisions would be required. He also insisted on the use of the two airborne divisions. Thus, both Morgan and Eisenhower judged the best strategy was to employ air power in support of an ever increasing ground offensive.<sup>30</sup>

The Combined Bomber Offensive was launched in earnest in mid-1943. It was comprised of three views of effective use of air power: the British view, the American airmen's view, and Eisenhower's view. The British saw bombing of urban and industrial areas as key. The American airmen, products of the Air Tactical School, held the belief that aircraft factories, petroleum refineries, and synthetic fuel plants were at the center of German strength. Eisenhower wanted transportation networks and other pieces of infrastructure that would affect the movement of troops and supplies to the invasion site to have top priority. All these efforts by strategic air power contributed to the overall defeat of Germany given the ground invasion. Was the ground invasion necessary on D-day or did our strategy make it so?

The effects of the Combined Bomber Offensive had been devastating to the Germans. The city raids had greatly affected their morale. The people had lost

faith in the prospect of victory and in their leaders. Most of all, they wanted the war to end. From interviews taken after the war, if the Germans had been at liberty to vote themselves out of the war, they would have done so well before the final surrender.<sup>31</sup>

High ranking German military officers were also of the opinion that the war should be concluded. Field Marshal Erwin Rommel, as early as February 1944, had agreed to support a movement that was committed to overthrowing Hitler. Rommel hoped that the war with the western Allies could be concluded before an invasion was launched. In May 1944 he had authorized a meeting of conspirators. They all agreed that if an armistice could be arranged, the Nazi regime would be overturned and German troops would be withdrawn from all conquered territory in the West. The coup d' état was set for the middle of June.<sup>32</sup>

Another area of debate on the use of air power was the effect of the "oil plan," the attack on Germany's synthetic and crude oil production facilities, versus the "Transportation Plan," which was Eisenhower's plan to support the invasion by attacking Western Europe's transportation system. This debate seemed to have more fury than substance. The two plans, which seemingly opposed to each other at the time, were actually complementary. They did, however, cause a division in the allocation of air resources.

The Germans had worried since the early days of the war about their petroleum supplies.<sup>33</sup> They found the failure of Allied bombing to strike the synthetic oil industry inexplicable. Writing to the German Minister of Armaments and War Production, Albert Speer in March 1944, Armed Forces High Command



Chief Wilhelm Keitel's staff thought it possible that enemy air forces would attack the oil industry to achieve a quick end to the war. In April, a *Luftwaffe* staff officer was more blunt. He recognized that since the major German oil refineries and fuel plants were within the range of Allied air power, he found it extraordinary that the Allies had not struck the oil industry—a target that would jeopardize the *Third Reich's* entire war effort.<sup>34</sup>

In May 1944, General Carl Spaatz, the American Eighth Air Force commander, pushed Germany's oil industry to the top of his priority list. He claimed that it would cause a 50 percent reduction in gasoline supplies within six months.<sup>35</sup> He would have done so earlier except that, during the months prior to D-day, and for a short time after, all available air power based on England was devoted to insuring the success of the invasion.<sup>36</sup>

Strategic bombing efforts were having a significant, although not readily apparent, effect on the German economy and war making capability. The application of air power to this critical area would exacerbate their problems. After one large raid on the oil industry, Speer stated,

"I shall never forget the date May 12... On that day the technological war was decided. Until then we had managed to produce approximately as many weapons as the armed forces needed, in spite of their considerable losses. But with the attack by nine hundred and thirty five daylight bombers of the American Eighth Air Force upon several fuel plants in central and eastern Germany, a new era in the air war began. It meant the end of German armaments production."<sup>37</sup>

Speer knew the end was near. He only hoped that oil producing targets would not be further engaged. After he had conducted a personal inspection of the damage done, Speer told Hitler... "The enemy has struck one of our weakest points. If they persist at it this time, we will soon no longer have any fuel production worth mentioning. Our one hope is that the other side has an air force General Staff as scatterbrained as ours!"<sup>38</sup> While the bombing attacks continued, the ground invasion was launched three weeks later.

## **World War II - Pacific Theater**

Air power played a central role in the resolution of the conflict in the Pacific Theater as well. Neither the air power enthusiasts of Great Britain nor of the United States were able to prove their theories about the effectiveness or efficiency of aerial bombardment during the European Theater. In the end, the atomic bomb finally provided means so destructive that few could any longer doubt it. However, was the atomic bomb really necessary?

Air power advocates truly believed that, given the proper weapons and bases, they could indeed destroy Japan through aerial assault and obviate the need for a ground invasion. Like the European campaign, this power would be wielded against several areas of Japan's might.

One area of vital importance to Japan's economic structure was her merchant shipping fleet. While this target was attacked by naval power as well, the role of air power in its degradation was significant.

Eight million nine hundred thousand tons of this shipping were sunk or so seriously damaged as to be out of action at the end of the war. Of this total, 55 percent was attributable to submarines and 40 percent attributable to air power.<sup>39</sup> Until April 1945, submarines were the major destroyer of Japanese shipping. After that time, air power accounted for over 50 percent of all ships sunk or damaged and a huge number of barges and smaller vessels.<sup>40</sup>

The attacks on shipping were devastating. During 1944, the effects of the net loss of shipping and slowdown in ship operations became such that by the end of the year it was no longer possible for Japan to protect or transport high priority war materials. Delivery of supplies to the Japanese Army decreased by 30 percent in 1944 and 50 percent in 1945. Moreover, the Japanese air forces were severely handicapped by lack of logistics.<sup>41</sup>

Japan relied heavily on sources of supply outside of her home islands. She greatly needed the resources that were being provided from the captured territories. Due to the loss of merchant marine shipping, it is the opinion of some that by August 1945, even without direct air attack on Japanese cities and industry, the overall level of war production would have significantly decreased. Many in Japan could foresee economic disaster.

The long range bombing offensive against the Japanese home islands started in November 1944. It was not a strategy to resolve the conflict, but was rather to be used to support a ground invasion. As in Europe prior to D-day, the principal measure of success set for strategic air action was the extent to which it would

weaken enemy capability and will to resist our amphibious forces at the time of the landings.

Several of the United States commanders and the representatives of the Strategic Bombing Survey who were called back from their investigations in Germany in early June 1945 stated their belief that, by the coordinated impact of blockade and direct air attack, Japan could be forced to surrender without an invasion. The controlling opinion, however, was that a ground force invasion would be necessary to force capitulation.<sup>42</sup>

This view of conflict resolution in the Pacific was held at the highest levels of the United States military establishment. General George C. Marshall, one of President Roosevelt's most trusted military advisors, believed air power in conjunction with a naval blockade would not work and Japan had to be invaded. His advocacy prevailed. Not surprisingly, the War Department Operations Division held a similar view.<sup>43</sup>

This strategy of ultimately supporting the ground invasion initially led to a selection of targets that would weaken the ability of Japan's forces to repel an invasion. However, the adopted method was to attack industry in Japanese cities and disrupt her railroad and transportation systems. It also supported attacking the very core of Japanese livelihood. The former did not get applied in force until March 1945 and the latter was just getting underway when the war ended.<sup>44</sup>

The bombing campaign on the Japanese home islands produced devastating effects. Production capacity of industrial plants fell significantly from either physical damage or dispersal forced by the threat of further physical damage. Some

examples are: oil refineries, 83 percent; aircraft engine plants, 75 percent; air-frame plants, 60 percent; and electronics and communication equipment plants, 70 percent.<sup>45</sup>

The effects on the morale of the Japanese people were also substantial. In June 1944 approximately two percent of the population believed that Japan faced the probability of defeat. By December 1944, just one month after the air attacks from the Marianas had begun, defeats in the Philippines had been suffered, and the food situation had deteriorated; 10 percent of the people believed Japan could not achieve victory. By March 1945, when the night incendiary attacks began and the food ration was reduced, this percentage had risen to 19 percent. In June 1945 it was 46 percent, and just prior to surrender, 68 percent. Of those who had come to this belief over one-half attributed the principal cause to air attacks.<sup>46</sup>

Sixty-four percent of the population stated that they had reached a point prior to surrender where they felt personally unable to go on with the war. Of these, almost 70 percent attributed the cause of their discontent to air attack.<sup>47</sup>

The interrelation of military, economic, and morale factors was complex in the Japanese culture. The Japanese military machine had lost its ability to protect its citizens, the Japanese economy was crumbling, and its people increasingly discontent. Given this state of affairs in August 1945, it is arguable that Japan might well have capitulated not only without a ground invasion, but even without resorting to the atomic bomb. This view is shared by the Strategic Bombing Survey which states... "Based on a detailed investigation of all the facts, and supported by the testimony of the surviving Japanese leaders involved, it is the Survey's opinion

that certainly prior to 31 December 1945, and in all probability prior to 1 November 1945, Japan would have surrendered even if the atomic bombs had not been dropped, even if Russia had not entered the war and even if no invasion had been planned or contemplated.”<sup>48</sup>

## **Vietnam**

At the start of United States involvement in Vietnam, air power advocates still clung to the doctrines from World War II. They were convinced that striking at the heart of an industrialized nation would quickly bring about its demise. When President Lyndon Johnson asked for a plan to bomb North Vietnam, Air Force planners proposed a 94 target list that included airfields, petroleum manufacturing and storage facilities, followed by the industrial system, and finally the road and transportation network.<sup>49</sup>

This strategy was flawed from the start. North Vietnam was an agrarian society, not an industrialized one. Moreover, in early 1965 the North was supporting an insurgency in the South and not waging a conventional war that fit nicely into United States strategic bombing doctrine.

Until the Tet offensive, the war in South Vietnam was strictly a guerrilla conflict. Viet Cong units composed five-sixths of the Communist army and intermingled with the local populace. Together with North Vietnamese troops, they fought an average of one day in thirty. This produced external supply needs of only 34 tons of material daily.<sup>50</sup> The bombing of the North could only have affected its war making capability by hitting just two targets: people and food.

President Johnson wanted air power to help achieve his goal of an independent, stable, non-Communist South Vietnam. He believed that controlled bombing would ultimately compel Hanoi to end the war by making it too costly. He also did not want to do anything to get China in the war. Yet many of his advisors viewed air power as a means to produce different ends.<sup>51</sup> With these diverse goals for air power, the first bombs of Rolling Thunder were dropped on 2 March 1965.

## **Rolling Thunder**

No one believed that the bombing would last for more than a few months. In fact, the Air Force submitted a proposal for a 28 day intensive campaign that would have struck all the targets on the Joint Chiefs of Staff list. The worst estimate listed was six months.<sup>52</sup> Rolling Thunder lasted from March 1965 to October 1968.

Ostensibly, Rolling Thunder had three objectives. The first one was strategic persuasion. Strategic persuasion mean that there was a level of pain beyond which Hanoi would no longer support the insurgency in the south. The second objective was to raise the morale of the military and political elites in South Vietnam. The final objective was interdiction. Rolling Thunder strikes against bridges, railroads, and roads would slow the flow of men and supplies moving south through the panhandle of North Vietnam. This goal soon dominated the campaign.<sup>53</sup>

Rolling Thunder was one of the longest bombing campaigns in the history of aerial warfare. During this campaign over a million sorties were flown and around three quarters of a million tons of bombs were dropped. Yet, it failed miserably.

Rolling Thunder failed for several reasons. First, American civilian and military strategists failed to properly recognize the nature of a limited war and air power's role in it. They believed that a strategy of strategic bombing which worked when the end state was unconditional surrender, would also work when there were limited objectives; albeit, different depending on which civilian or military leader was asked. They were of the opinion that if a lot of air power could bring a major industrialized nation to its knees, then a lesser amount would work for a country with a limited industrial base.

Second, the employment of air power in an escalating fashion to achieve limited objectives produced little or no effect. This policy was crippling the potential effectiveness of air power. It also underestimated the ability of the North Vietnamese to endure "piece meal" aerial bombardment.

Third, military leaders failed to develop and propose a strategy appropriate to the war at hand. Bombing of strategic targets in the North had little to do with the insurgency that was raging in the South. Moreover, even as the bombing campaign progressed and civilian constraints were lessened, military leaders stayed with the same strategic bombing doctrine.

The failure of Rolling Thunder was confirmed in a recent interview with Bui Tin, a former colonel in the North Vietnam Army. When asked about the American bombing of the Ho Chi Minh trail, he replied, "Not very effective. Our operations were never compromised by attacks on the trail. At times, accurate B-52 strikes would cause real damage, but we put so much in the top of the trail that enough men and weapons to prolong the war always came out the bottom." <sup>54</sup> When asked



of the American bombing of the North, he answered,... "If all the bombing had been concentrated at one time, it would have hurt our efforts. But the bombing was expanded in slow stages under Johnson and it didn't worry us..."<sup>55</sup>

## **Linebacker I**

Linebacker I was a strategic bombing attack that was launched in response to an invasion by the North Vietnamese in March 1972. Dubbed "the Nguyen Hue offensive" in honor of a Vietnamese emperor, fourteen North Vietnamese divisions and 26 separate regiments invaded the South.<sup>56</sup> This kind of invasion was what American strategists had been anticipating since 1956.

Linebacker I was designed to cripple North Vietnam's ability to conduct offensive operations inside South Vietnam. Its objective was to destroy war-related resources such as petroleum storage facilities and power-generating plants; to reduce or restrict the importing of supplies by ships through the harbors and by rail and road from China; and to impede the flow of men and supplies by destroying the internal transportation system.<sup>57</sup>

If successful, Linebacker I would blockade North Vietnam, sealing it from outside sources of supply and destroy her ability to support the 14 divisions of soldiers in the South. This would ultimately result in North Vietnam being compelled to come to the peace negotiations table.

By September, it was clear that Linebacker I was working. The immediate threat to South Vietnam was nearing an end. Additionally, the imports of supplies into North Vietnam were estimated at 35 to 50 percent below what they had been in

May.<sup>58</sup> Furthermore, a peace agreement that had eluded negotiators for over four years seemed to be at hand. Therefore, President Nixon ordered the end to Linebacker I on 23 October 1972.

Linebacker I succeeded where Rolling Thunder failed for several reasons. First, air power had been used correctly and applied appropriately during Linebacker I. The North had put 14 divisions inside South Vietnam and they were consuming supplies that needed to be produced and transported.

Second, President Nixon gave the military increased targeting latitude during this campaign. Unlike his predecessor, he only gave guidance and guidelines and allowed his military generals and planners to keep the North Vietnamese off balance.

Finally, Linebacker I heralded the first introduction of laser guided munitions. These munitions allowed the air forces to deliver fewer bombs with greater lethality.

## **Linebacker II**

Linebacker II was initiated by President Nixon because he feared that the newly elected Democratic controlled Congress would legislate the United States out of the war. He wanted to do something to bring Hanoi back to the bargaining table before the new Congress was convened. This bombing campaign was aimed at Hanoi's will.

On 18 December 1972, Linebacker II commenced. Sixteen targets had been identified around Hanoi and 13 in and around Haiphong.<sup>59</sup> It was initially

scheduled to last only three days. But on 21 December the President ordered it extended indefinitely. It would finally end on 29 December.

During the eleven days of Linebacker II, B-52's flew 739 sorties and dropped 15,237 tons of bombs over 34 targets.<sup>60</sup> The damage done to North Vietnamese targets was significant. However, more significant was the effect on the leadership and people of North Vietnam.

Linebacker II had completely destroyed the North Vietnamese air defense system, wrecked their largest missile assembly facility and degraded their command and control systems. North Vietnam was virtually defenseless against B-52 attacks. Hanoi was finally *compelled* to return to meaningful negotiations for peace.

## **Libya - Operation El Dorado Canyon**

Air power has been used successfully to achieve conflict resolution where limited objectives are the desired end state. Two such cases are Operations El Dorado Canyon and Operation Deliberate Force.

At 1900 hours eastern time on 14 April 1986<sup>61</sup> the United States conducted a military attack against Libya. In his address to the Nation that evening President Reagan stated that this operation was in response to new terrorist attacks launched against American citizens.<sup>62</sup> Strategic air power was being used in carrying out our counterterrorist strategy.

The chronology of terrorist attacks directed at Americans leading up to this point was wearing the Reagan Administration's patience thin. More than 705

terrorist acts were committed in 1985 at a cost of death or injury to nearly 150 Americans and countless others.<sup>63</sup>

President Reagan received conclusive evidence that the terrorist bombing of the LaBelle discotheque in which one American was killed and 50 were wounded, was planned and executed under the direct orders of the Libyan regime. Moreover, he had solid evidence that other attacks were planned against U.S. installations, diplomats and even American tourists. He ordered the execution of Operation El Dorado Canyon.<sup>64</sup>

Operation El Dorado Canyon was an effective use of air power. It succeeded for two reasons. First, President Reagan was decisive in his use of air power. Once he felt that a military option was appropriate, he employed the strategy of air power as the tool to resolve this conflict.

Second, the targets that were selected and the force used against them were appropriate for the desired end state. President Reagan desired to diminish Qadhafi's capacity to export terror and provide him with incentives and reasons to alter his criminal behavior. These goals were met and we are the benefactors of them even to this day.

## **Bosnia - Operation Deliberate Force**

Operation Deliberate Force, the bombing of Bosnia, is another example of the successful use of air power in resolving a conflict that has limited objectives. The nations of the former Yugoslavia had been fighting for many years with little

chance of peace in sight. The United Nations had deployed peacekeepers to the area, however, there was little peace to keep.

Negotiators had been struggling for over three years to get the warring factions to the peace table. Nothing seemed to be working even though the United Nations had threatened the use of force to stop the “ethnic cleansing” and other atrocities that were occurring. However, in late July 1995, the Bosnian Serbs launched a grisly mortar attack on a Sarajevo market that left nearly 40 dead and more than 80 wounded.<sup>65</sup> This act triggered Operation Deliberate Force.

Over the period from 30 August to 14 September 1995, North Atlantic Treaty Organization aircraft, mostly from the United States, flew some 3,500 sorties of which 750 were actually strike sorties. According to United States military officials, more than 600 precision weapons were used as well as 13 Tomahawk missiles.<sup>66</sup>

These attacks had two purposes. First, NATO wanted to draw a firm line against further Bosnian Serb attacks against Sarajevo and any of the other “safe areas.” In the past, United Nations officials have had significant difficulty conducting safe passage of humanitarian aid convoys to surrounded cities. Furthermore, as was the case in Sarajevo, shelling of innocent civilians has been the norm.

Second, United States as well and United Nations officials wanted to bring the warring factions to the peace negotiations table. This has been a goal for over three years.

The air campaign was a huge success. Perhaps the most telling sign of it was how quickly the Bosnian Serb commander, General Ratko Mladic, voiced a willingness to come to the negotiating table. After three days of bombing Mladic voiced that, "It is time to talk about peace...."<sup>67</sup> This watershed event has resulted in a negotiated peace which exists to this date.

## **Iraq - Operation Desert Storm**

Operation Desert Storm, the war with Iraq, is an interesting case in the application of air power. As the circumstances for this war evolved, air planners saw this as the event that they were waiting for to finally prove the efficacy of their weapons systems.

Air planners were developing a new plan for this war, one that would employ new concepts and apply unrelenting pressure on the Iraqi nation and Saddam Hussein's regime until he acquiesced to United Nations and coalition demands. These air planners hoped to correct all the misconceptions concerning the application of air power in the past, especially Vietnam. Air power would be the main show and would demonstrate—once and for all—its dominant and decisive role. Some planners hoped to prove that airpower could in fact win all alone, something that none of their predecessors had done. It was not to be this time either.

As had been the case innumerable times before, the strategy envisioned by the senior leadership was based on a ground invasion. While airmen had their ideas, none of them was in a position to carry the day. Many make the argument

that General Dugan was sacked as the Air Force Chief of Staff not for the reasons stated, but because he publicly argued for air power as the primary option to winning in the Gulf.<sup>68</sup>

Military operations during the Gulf War were spectacular, particularly the application of air power. Many believed that it had made all the difference. Indeed it had. Some 52,000 air-to-surface sorties delivered approximately 210,000 unguided bombs, 9,300 guided bombs, 5,400 guided air-to-surface missiles and 2,000 anti-radar missiles; American forces also hurled more than 300 cruise missiles at the enemy.<sup>69</sup>

The effects of this massive air onslaught were just as impressive. The Iraqi air force was decimated; the air defense system succumbed within days—really, hours—to an attacking air force that lost only a tiny fraction of its assets. The Iraqi electrical grid, oil refineries and most of the telephone and communications system stopped functioning. Before the ground war began on 24 February, the Republican Guard had lost nearly a quarter of its armor to air attacks, and frontline units had suffered even heavier losses. Moreover, airpower had completely disrupted Iraqi logistics and immobilized the Iraqi army. Aircraft operating around the clock crushed the one attempt by the Iraqis to launch a large-scale operation—the two-division thrust southward that barely got over the Saudi border at the town of Khafji. Although ground action necessarily consummated the final victory for coalition forces, air power had made the final assault effortless.<sup>70</sup>

Even though the conditions to execute a strategy of air power in the “primary” role existed, senior strategists opted for a ground invasion as the basis for

conflict resolution. General Colin Powell, Chairman of the Joint Chiefs of Staff argued that air power was not enough. The only sure path to victory in his view was on the ground.<sup>71</sup> At the operational level, the view was the same. The Deputy Commander in Chief, Lieutenant General Calvin A. H. Waller, worried that the air planners were trying hard to win the war without having to resort to a ground attack. They would then be able to say that air had won the war.<sup>72</sup>

Their view is not shared by all. House Armed Services Committee Chairman Les Aspin and long time national security expert Paul Nitze believe that the air option was viable. The deputy commander of the British forces in the Gulf told reporters that air power alone could win—if given enough time.<sup>73</sup>

Time, however, did not seem to matter much to strategic planners. After the initial deployment of ground troops, invasion planners determined that they required more soldiers to effectively do the job. The deployment of those additional units delayed the anticipated ground combat assault by months. Air power was employed for 1,000 hours in the Gulf War. That figure would have been cut in half, regardless of air power's continued effectiveness, if the ground troops could have gotten in theater sooner.<sup>74</sup>

## **SECTION IV**

### **THE FINAL ANALYSIS**

#### **Observations**

The United States, in all of its military history since the turn of the Twentieth Century, has been blessed with great strategic thinkers and planners.



For the most part, these leaders have carried our military through numerous wars and minor conflicts with tremendous results. However, all of our strategies for conflict resolution in major conflicts have been based on a ground invasion philosophy.

From both theaters of World War II to the Gulf War, air power played a key role in how the United States resolved conflicts. In almost every case, air power was *used* to support the inevitable ground invasion rather than *applied* as a strategy to resolve the conflict.

The historical evidence is overwhelming. In the European Theater of World War II, the Germans were nearing collapse just prior to D-day. While there might be debate in Europe, there can be no debate that air power brought the Pacific Theater conflict to a successful conclusion. It is significant that air power, supported by a naval blockade, may have had the same result without the horror of the atomic detonations.

Students of military history frequently cite the Vietnam conflict as an example of the failure of air power. This failure cannot be blamed entirely on politicians, the press, or the antiwar movement. It is mostly due to a lack of a coherent strategy for air power employment in this unique circumstance.

Many air power advocates claim the Linebacker I and II campaigns as great successes. They were successful in their limited scope. In these two campaigns, air power was applied appropriately and for an intended purpose. President Nixon, unlike his predecessor, wanted to achieve a negotiated peace and get the United

States out of the war. On 27 January 1973, that goal was accomplished.<sup>75</sup>

Arguably, this use of air power facilitated the resolution of conflict in the Vietnam war.

In conflicts with limited objectives, air power has been extremely successful. In both Operation El Dorado Canyon and Deliberate Force, the conflicts were resolved quickly and the political objectives achieved. The desired end states of both of these operations exist today.

In the Gulf War the onslaught of air power on the powerful Iraqi war machine quickly rendered it impotent. Moreover, the Iraqi economy and infrastructure were severely damaged. No one imagined victory in 100 hours.

## **Conclusions**

Air power will not be a panacea that will solve all of the Nation's problems or win all of its wars. It is not preeminent over the other instruments of military power. In certain circumstances air power may be the force, supported by other elements of military power, that can achieve the desired result or be decisive in victory. To date we have not seen credible results because the strategy of air power in support of a land campaign has been the norm.

In a time when the military of the United States is being downsized, the armed forces must fight with a strategy which maximizes the strengths and capabilities of each service. Historically, American strategy has been to conduct a ground invasion and *use* air power to support it. Air power is most effective if it is

*applied* as a strategy to achieve a desired end state. It is a powerful tool in the strategic planner's box that deserves to be considered and not arbitrarily dismissed.

As we develop military strategies for the future, we must contemplate using all of the tools available to us to resolve conflict in terms the people of the United States find acceptable. In some cases, air power might just be the right tool.

## Endnotes

<sup>1</sup> John D. Morrocco, "U.S. War Plan: Air Strikes To Topple Hussein Regime," *Aviation Week & Space Technology*, 24 September 1990, 17, quoting General Michael J. Dugan, then Chief of Staff of the United States Air Force, speaking about air power's role in the Gulf War. The Secretary of Defense later fired him for these and other comments concerning the use of air power in the Gulf War.

<sup>2</sup> Carl H. Builder, *The Icarus Syndrome* (New Brunswick (USA) and London (UK): Transaction Publishers, 1994), 3.

<sup>3</sup> *Compton's Encyclopedia*, 1984 ed., s.v. "Wright Brothers: Wilbur and Orville."

<sup>4</sup> Giulio Douhet, Editor's Introduction, *The Command of the Air*, translated by Dino Ferrari (Washington: Office of Air Force History, 1983), vii. These facts were originally found in Lee Kennett's *A History of Strategic Bombing* (New York, 1982), pages 1-9.

<sup>5</sup> Lee B. Kennett, *A History of Strategic Bombing* (New York: Scribner, 1982), 1-9.

<sup>6</sup> Morrocco, 17.

<sup>7</sup> General Giulio Douhet (1869-1930), the Italian prophet of air power; General William ("Billy") Mitchell (1879-1936), the American evangelist for air power; and Air Marshall Hugh Trenchard (1873-1956), air power advocate and institutional father of the Royal Air Force. They all had similar ideas of air power theory and were all born within a decade of each other.

<sup>8</sup> Builder, 59.

<sup>9</sup> Douhet, *The Command of the Air*.

<sup>10</sup> Ibid., 28.

<sup>11</sup> Ibid., 28.

<sup>12</sup> Ibid., 23.

<sup>13</sup> Builder, 44-45.

<sup>14</sup> William Mitchell, *Winged Defense* (New York: Putnam's), 5-6.

<sup>15</sup> Ibid., xvi.

<sup>16</sup> Builder, 53.

<sup>17</sup> Ibid., 47.

<sup>18</sup> Ibid.

<sup>19</sup> Ibid., 77.

<sup>20</sup> Mauer Mauer, *Aviation in the U.S. Army* (Washington, DC: Office of Air Force History, 1987), 331-332.

<sup>21</sup> Gen. Frederick J. Kroesen, "The U.S. Army—Yesterday, Today and Tomorrow," *Army*, March 1996, 11.

<sup>22</sup> Ibid., 14.

<sup>23</sup> Thomas E. Griess, ed., *The Second World War: Europe and the Mediterranean* (Wayne, NJ: Avery Publishing Group Inc., 1984), as reprinted in USAWC Department of Military Strategy, Planning and Operations, Advanced Warfighting Studies Program, Operation Overlord, Volume I, 11.

<sup>24</sup> James C. Gaston, *Planning the American Air War, Four Men and Nine Days in 1941* (National Defense University Press, 1982), 2. The four men were the Division Chief, Lieutenant Colonel Harold Lee George, Lieutenant Colonel Kenneth N. Walker, Major Haywood S. Hansell, and Major Laurence S. Kuter.

<sup>25</sup> Ibid., 107.

<sup>26</sup> Griess, 11.

<sup>27</sup> Franklin D'Olier et al., *The United States Strategic Bombing Surveys (European War) (Pacific War)* (Maxwell Air Force Base, AL: Air University Press, 1987), 9.

<sup>28</sup> Griess, 12.

- <sup>29</sup> Ibid.
- <sup>30</sup> Ibid., 17-18.
- <sup>31</sup> D'Olier et al., 12.
- <sup>32</sup> Griess, 44.
- <sup>33</sup> Williamson Murray, *Strategy For Defeat The Luftwaffe 1933-1945* (Maxwell Air Force Base, AL: Air University Press, 1983), 272.
- <sup>34</sup> Ibid., 272-273.
- <sup>35</sup> Ibid., 267.
- <sup>36</sup> D'Olier et al., 20.
- <sup>37</sup> Griess, 29.
- <sup>38</sup> Ibid., 29-30.
- <sup>39</sup> D'Olier et al., 73.
- <sup>40</sup> Ibid.
- <sup>41</sup> Ibid., 74.
- <sup>42</sup> Ibid., 83.
- <sup>43</sup> Thomas B. Allen and Norman Polmar, *Code-Name Downfall* (New York: Simon & Schuster, 1995), 134-135.
- <sup>44</sup> D'Olier et al., 83.
- <sup>45</sup> Ibid., 88.
- <sup>46</sup> Ibid., 95.
- <sup>47</sup> Ibid.
- <sup>48</sup> Ibid., 107.
- <sup>49</sup> Earl H. Tilford, Jr., *Setup* (Maxwell Air Force Base, AL: Air University Press, 1991), 1.
- <sup>50</sup> Mark Clodfelter, *The Limits of Air Power* (New York: Free Press, 1989), 205.
- <sup>51</sup> Ibid., 204. On the eve of the first Rolling Thunder mission, National Security Advisor McGeorge Bundy argued that bombing would bolster morale; Ambassador Maxwell Taylor, break Hanoi's will to fight; Secretary of State Dean Rusk, secure bargaining leverage; and Secretary of Defense Robert McNamara, convey political resolve to Hanoi.
- <sup>52</sup> Tilford, 104.
- <sup>53</sup> Ibid., 105.
- <sup>54</sup> Unknown, "How North Vietnam Won the War," *Wall Street Journal*, 3 August 1995, 22.
- <sup>55</sup> Ibid.
- <sup>56</sup> Tilford, 224-225.
- <sup>57</sup> Ibid., 234.
- <sup>58</sup> Ibid., 236.
- <sup>59</sup> Ibid., 254.
- <sup>60</sup> Ibid., 263.
- <sup>61</sup> The actual attack took place at 0200 hours, 15 April 1986 Libyan time which was 1900 hours, 14 April eastern time.
- <sup>62</sup> Ronald Reagan, "U.S. Exercises Right of Self-Defense Against Libyan Terrorism," *Department of State Bulletin* Vol: 86 (June 1986): 1-2.
- <sup>63</sup> Congress, Senate, Subcommittee on Security and Terrorism of the Committee on the Judiciary, *The Nature and Extent of Libya's Direct Involvement in International Terrorism*, 99<sup>th</sup> Cong., 2d sess., 19 February 1986, 2.
- <sup>64</sup> Reagan, 4.
- <sup>65</sup> Fred Coleman, "Will This Lead To Peace?" *U.S. News & World Report*, 11 September 1995, 34.
- <sup>66</sup> John D. Morrocco, "Bombing Compels Serb Withdrawal," *Aviation Week & Space Technology*, 25 September 1995, 36.
- <sup>67</sup> Bruce Wallace, "Turning the Tide," *MacLean's*, 11 September 1995, 37.
- <sup>68</sup> John Barry and Evan Thomas, "A Second Look at an Air War," *Newsweek*, 7 January 1991, 18.

<sup>69</sup> Eliot A. Cohen, "The Mystique of U.S. Air Power," *Foreign Affairs*, January/February 1994, 110.

<sup>70</sup> Ibid., 111.

<sup>71</sup> Barry and Thomas, 18.

<sup>72</sup> P. Mason Carpenter, *Joint Operations in the Gulf War* (Maxwell Air Force Base, AL: Air University Press, 1996), 42.

<sup>73</sup> Barry and Thomas, 18.

<sup>74</sup> Conversation by the author with a senior member of the CENTCOM planning staff.

<sup>75</sup> Tilford, 265.

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